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Express Mail No. EV 746 664 819 US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Muller et al.

Group Art Unit: 3624

Serial No.: 09/764,366

Examiner: Patel, Jagdish

Filed: Jan. 18, 2001

Attorney Docket No. 060967-0014

For: METHOD FOR MARKET MAKING

Confirmation No: 7123

**PETITION TO WITHDRAW HOLDING  
OF ABANDONMENT UNDER 37 C.F.R. § 1.181(a)**

Mail Stop: Petitions  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants hereby respectfully request withdrawal of a holding of abandonment in the above-identified application under 37 C.F.R. § 1.181(a). The Notice of Abandonment states that the application was abandoned due to applicants' failure to timely file a proper reply to the Office Action mailed on 25 March 2005.

The Applicants, however, respectfully submit that the Response was filed on time. In support, Applicants have attached a copy of the stamped postcard dated September 26, 2005 (a Monday) indicating receipt by the Patent Office of a timely filed Amendment of 11 pages and a petition for a three month extension of time.

In view of the above-referenced documentation, applicants respectfully submit that the Amendment was timely filed on September 26, 2005. Therefore the Notice of Abandonment dated October 7, 2005 was sent in error. Accordingly, Applicants request that the holding of abandonment be withdrawn.

Upon checking PAIR, applicants noted that the first and last pages of the Amendment of September 26, 2005 were scanned in but pages 2-10 apparently were not. Accordingly,

applicants are resubmitting a copy of the Three Month Extension of Time; Amendment and Change of Correspondence Address and request that they be accepted as previously submitted on a timely basis. Since the fee for an extension of time apparently was not previously charged, please charge the \$510.00 for three month extension of time to Deposit Account No. 50-0310.

No fee is believed due in connection with the Petition to Withdraw a Holding of Abandonment. However, if a fee is due, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 50-0310.

Respectfully submitted,

Dated: March 17, 2006

A handwritten signature in cursive script, reading "Francis E. Morris". The signature is written in dark ink and is positioned above a horizontal line.

---

Francis E. Morris (Reg. No. 24,615)  
Morgan, Lewis & Bockius LLP  
1111 Pennsylvania Avenue, NW  
Washington, D.C. 20004  
212.309.6000



Express Mail No.: EV 797 296 591 US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Müller, et al.

Confirmation No.: 7123

Serial No. 09/764,366

Art Unit: 3624

Filing Date: January 18, 2001

Examiner: Jagdish Patel

Title: METHOD FOR MARKET MAKING

Attorney Docket No: 060967-0014

**AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please amend the above-identified application as set forth on the following pages:

## IN THE CLAIMS

1. (Currently amended) A method performed by a computer of market making in an asset trading system, comprising the steps of.

(a) receiving asset price data;

(b) receiving current system position information;

(c) receiving quote request information;

~~(d) storing said received asset price data, said received current system position information, and said received quote request information in a computer-readable medium;~~

~~(e)~~(d) calculating target position information for each of one or more trading models;  
and

~~(f) storing said calculated target position information in a computer-readable medium; and~~

~~(g)~~(e) calculating a bid/ask quote in response to said received quote request information, said calculation of a bid/ask quote using a hedging method and being based on said asset price data, said quote request information, said current system position information, and said target position information.

2. (Original) A method as in claim 1, wherein each of said one or more trading models comprises:

(a) a price collector component;

(b) a price filter component;

- (c) a price database component;
  - (d) a gearing calculator component;
  - (e) a deal acceptor component;
  - (f) an opportunity catcher component; and
  - (g) a book-keeper component.
3. (Currently amended) A method as in claim 1, wherein said calculation of a bid/ask quote is also based on a weighted sum of ~~positions~~ target position information of said trading models.
4. (Cancelled)
5. (Currently amended) A method as in claim ~~[[4]]~~ 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating a weighted sum of said trading model positions.
6. (Currently amended) A method as in claim ~~[[4]]~~ 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating a total exposure from said trading model positions.
7. (Currently amended) A method as in claim ~~[[4]]~~ 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating a total amount of home currency appearing in all open positions.
8. (Currently amended) A method as in claim ~~[[4]]~~ 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating an out-of-equilibrium exposure.
9. (Currently amended) A method as in claim ~~[[4]]~~ 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating a new potential net exposure.

10. (Currently amended) A method as in claim [[4]] 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating an equilibrium position.
11. (Currently amended) A method as in claim [[4]] 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating boundaries of possible exposures.
12. (Currently amended) A method as in claim [[4]] 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating values for a pair of quoting functions.
13. (Original) A method as in claim 12, wherein said quoting functions are odd polynomial functions.
14. (Original) A method as in claim 12, wherein said quoting functions are tangent functions.
15. (Original) A method as in claim 12, wherein said quoting functions are stepwise linear functions.
16. (Original) A method as in claim 12, wherein said quoting functions are inverse sigmoid functions.
17. (Original) A method as in claim 12, wherein said quoting functions are combinations of odd polynomial functions, tangent functions, stepwise linear functions, and inverse sigmoid functions, and wherein said combinations may comprise less than all four types of functions.
18. (Currently amended) A method as in claim [[4]] 1, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating an average price and an average spread.

19. (Currently amended) A method as in claim [[4]] 1, wherein said asset is a currency, and wherein said hedging method comprises the steps of:

- (a) calculating a weighted sum of said trading model positions;
- (b) calculating a total exposure from said trading model positions;
- (c) calculating a total amount of home currency appearing in all open positions;
- (d) calculating an out-of-equilibrium exposure;
- (e) calculating a new potential net exposure;
- (f) calculating an equilibrium position;
- (g) calculating boundaries of possible exposures;
- (h) calculating values for a pair of quoting functions; and
- (i) calculating an average price and an average spread.

20. (Currently amended) ~~Computer software, stored in a~~ A computer-readable medium, for ~~market making in an asset trading system, comprising software~~ having computer code executable by a computer for:

- (a) receiving asset price data;
- (b) receiving current system position information;
- (c) receiving quote request information;
- (d) ~~storing said received asset price data, said received current system position information, and said received quote request information in a computer readable medium;~~

(e) ~~(d)~~ calculating target position information for each of one or more trading models;  
and

~~(f) storing said calculated target position information in a computer-readable medium; and~~

~~(g)~~ (e) calculating a bid/ask quote in response to said received quote request information, said calculation of a bid/ask quote using a hedging method and being based on said asset price data, said quote request information, said current system position information, and said target position information.

21. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim 20, wherein each of said one or more trading models comprises:

- (a) a price collector component;
- (b) a price filter component;
- (c) a price database component;
- (d) a gearing calculator component;
- (e) a deal acceptor component;
- (f) an opportunity catcher component; and
- (g) a book-keeper component.

22. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim 20, wherein said calculation of a bid/ask quote is also based on a weighted sum of ~~positions~~ the target position information of said trading models.

23. (Cancelled)



24. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating a weighted sum of said trading model positions.
25. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating a total exposure from said trading model positions.
26. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating a total amount of home currency appearing in all open positions.
27. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating an out-of-equilibrium exposure.
28. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating a new potential net exposure.
29. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating an equilibrium position.
30. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating boundaries of possible exposures.

31. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating values for a pair of quoting functions.
32. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim 31, wherein said quoting functions are odd polynomial functions.
33. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim 31, wherein said quoting functions are tangent functions.
34. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim 31, wherein said quoting functions are stepwise linear functions.
35. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim 31, wherein said quoting functions are inverse sigmoid functions.
36. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim 31, wherein said quoting functions are combinations of odd polynomial functions, tangent functions, stepwise linear functions, and inverse sigmoid functions, and wherein said combinations may comprise less than all four types of functions.
37. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the step of calculating an average price and an average spread.
38. (Currently amended) ~~Computer software~~ The computer-readable medium as in claim [[23]] 20, wherein said asset is a currency, and wherein said hedging method comprises the steps of.

- (a) calculating a weighted sum of said trading model positions;

- (b) calculating a total exposure from said trading model positions;
- (c) calculating a total amount of home currency appearing in all open positions;
- (d) calculating an out-of-equilibrium exposure;
- (e) calculating a new potential net exposure;
- (f) calculating an equilibrium position;
- (g) calculating boundaries of possible exposures;
- (h) calculating values for a pair of quoting functions; and
- (i) calculating an average price and an average spread.

## REMARKS

In the Office Action of March 25, 2005, claims 1-38 were rejected under 35 U.S.C. 101 because they were deemed to be directed to non-statutory subject matter. Claims 1-38 were also rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Further, claims 1, 2, 20 and 21 were rejected as anticipated by Rikard et al. (U.S. Patent No. 6,016,483); and claims 3 and 22 were rejected under 35 U.S.C. 103(a) as unpatentable over Rikard and Official Notice of the use of weighted sums in trading models.

The Examiner indicated that the rejection of claims 1-19 under 35 U.S.C. 101 could be overcome by reciting that the steps of these claims are performed by a server or processor. Accordingly, claim 1 has been amended to recite "A method performed by a computer . . . "

The Examiner indicated that the rejection of claims 20-38 under 35 U.S.C. 101 could be overcome by replacing the recitation of computer software with language such as "as computer-readable medium having stored instructions or computer code executable by a computer performing the process steps." Accordingly, claim 20 has been amended to recite "A computer-readable medium having computer code executable by a computer for . . . "

With respect to the rejections of the claims under 35 U.S.C. 112, claims 1 and 20 have been amended to delete the recitation of the storing steps at paragraphs (d) and (f).

The Examiner's objection to applicants' recitation of "each of one or more trading models" is not understood. This language is intended to be the initial recitation of "trading models." If the Examiner prefers, applicant is willing to change the language "for each of one or more trading models" to "for a trading model."

Claim 3 has been amended to refer to "target position information" which has antecedent basis in claim 1.

With respect to the alleged contradiction between claims 3 and 4, on the one hand, and

claim 1 on the other, it is respectfully submitted that the list of elements used in the calculation recited in the last paragraph of claim 1 is not intended to be a complete listing and no language indicative of a complete listing (such as "consisting of") has been used in the last paragraph of claim 1. In the case of the recitation of the "hedging method" in claim 4, this is no longer an issue since the hedging method language has been incorporated into claim 1. In the case of the use of weighted sums as recited in claim 3, claim 3 has been amended to indicate more clearly that such use is in addition to the elements recited in claim 1 and does not contradict the recitation of claim 1.


With respect to the rejection of claims 1-3 and 20-22 on §102 or §103 grounds, the limitations of claims 4 and 23 which were not rejected on prior art have been incorporated into claims 1 and 20. Accordingly, amended claims 1 and 20 are believed patentable over the references cited. Likewise, dependent claims 2, 3, 5-19, 21, 22 and 24-38 are believed patentable.

Aside from the fee for an extension of time, no additional fee is believed to be due for filing this response. However, if a fee is due, please charge such fee to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310.

If the Examiner believes a telephone interview would expedite prosecution of this application, he is invited to call applicant's attorney at the number given below.

Respectfully submitted,

Date: September 26, 2005

  
Francis E. Morris 24,615  
Morgan, Lewis & Bockius LLP (Reg. No.)  
101 Park Avenue  
New York, NY 10178  
(212) 309-6632



Express Mail No. EV 797 296 591 US  
NEW ATTORNEY DOCKET NO.: 060967-0014

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Müller, et al. Examiner: Jagdish Patel  
Appln. Ser. No.: 09/764,366 Attorney Docket: 060967-0014  
(formerly 10366-0014)  
Filing Date: January 18, 2001 Confirmation No. 7123  
Entitled: METHOD FOR MARKET MAKING

**CHANGE OF CORRESPONDENCE ADDRESS and**  
**CHANGE OF ATTORNEY DOCKET NUMBER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please change the correspondence address for this application to: **Customer Number 009629.**

Please change the Attorney Docket Number for this application to: 060967-0014

Please direct any inquiry to the undersigned below at 212-309-6632.

Respectfully submitted,

Date: September 26, 2005

By:

Francis E. Morris  
Reg. No. 24,615

Correspondence Address:  
MORGAN, LEWIS & BOCKIUS LLP  
1111 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004



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Express Mail No.	EV 797 296 591 US	Date Mailed:	September 26, 2005
Serial No.	09/764,366	Confirmation No.	7123
Inventor:	Müller et al.	Filed:	January 18, 2001

Entitled: **METHOD FOR MARKET MAKING**

Enclosed:

1. Petition for Three-Month Extension of Time to Respond to Office Action mailed March 25, 2005, 2 pages (original + ~~copy~~)
2. Amendment, 11 pages
3. Change of Correspondence Address and Change of Attorney Docket Number, 1 page
4. Return postcard

Attorney: Francis E. Morris/15105      Docket No. 060967-0014 (formerly 10366-0014)



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Express Mail No.: EV 797 296 591 US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Müller, et al.

Confirmation No.: 7123

Serial No. 09/764,366

Art Unit: 3624

Filing Date: January 18, 2001

Examiner: Jagdish Patel

Title: METHOD FOR MARKET MAKING Attorney Docket No: 060967-0014

**MAIL STOP AMENDMENT**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**PETITION FOR THREE-MONTH EXTENSION OF TIME TO RESPOND TO  
OFFICE ACTION MAILED MARCH 25, 2005**

Sir:

Applicant hereby petitions for a three-month extension of time to respond to the Office Action mailed March 25, 2005, thus extending the due date for filing the enclosed Amendment from June 25, 2005 to September 26, 2005 (September 25, 2005 being a Sunday). The fee for this extension is estimated to be \$510.00.

The Commissioner is hereby authorized to charge Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 for all required fees for this reply and any further reply requiring a petition for extension of time for its timely submission. A copy of this sheet is enclosed for such purpose.

Respectfully submitted,

Date: September 26, 2005

Francis E. Morris, Esq.

Registration No. 24,615

MORGAN, LEWIS & BOCKIUS LLP

Customer No. 009629

(212) 309-6632